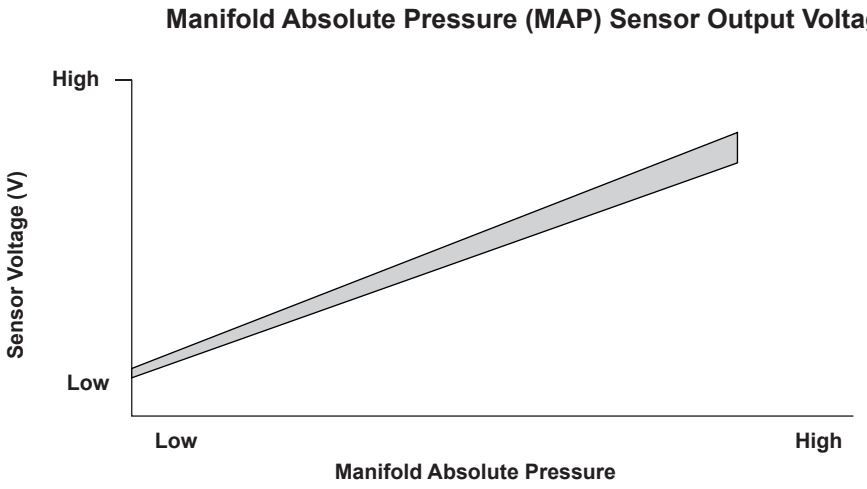
DTC P1128: Manifold Absolute Pressure (MAP) Sensor Lower Than Expected



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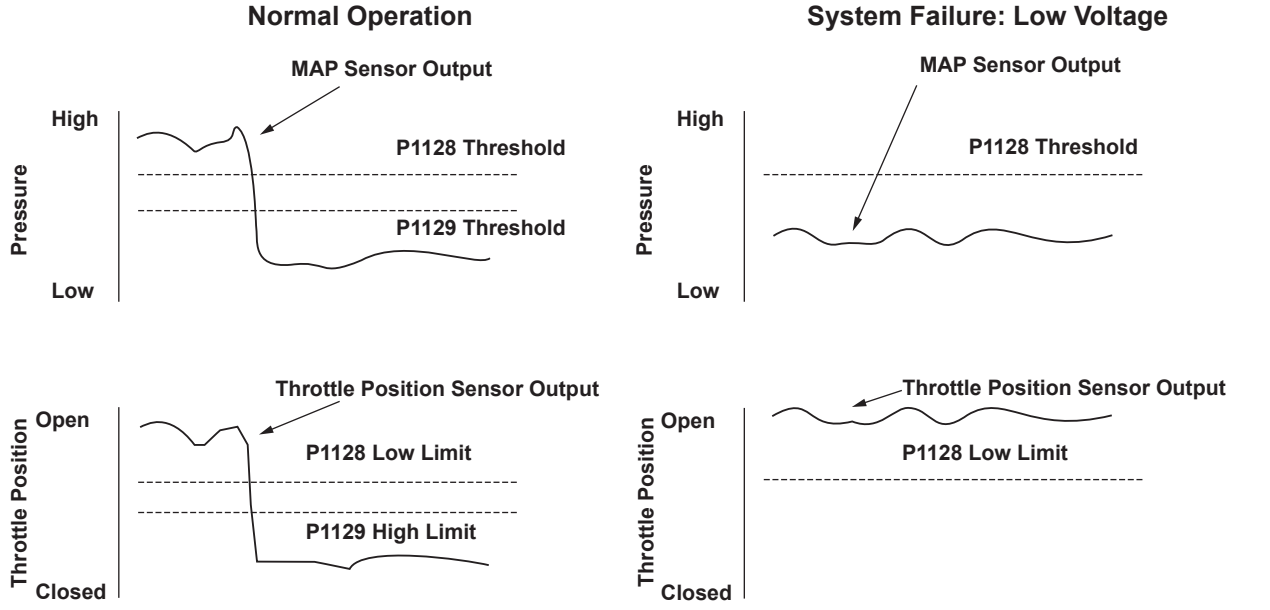

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General Description

The manifold absolute pressure (MAP) sensor senses manifold absolute pressure (vacuum) and converts it into electrical signals. The MAP sensor outputs low signal voltage at high-vacuum (idling) and high signal voltage at low-vacuum (throttle valve wide open).
The engine control module (ECM)/powertrain control module (PCM) compares a predetermined MAP value at a given throttle position and manifold absolute pressure with the output voltage value of the MAP sensor.
If the MAP sensor outputs lower voltage than expected, the ECM/PCM detects a malfunction and stores a DTC.

Monitor Execution, Sequence, Duration, DTC Type

Execution	Once per driving cycle
Sequence	None
Duration	2 seconds or more
DTC Type	Two drive cycles, MIL ON

Enable Conditions

Condition		Minimum	Maximum
Engine coolant temperature		167ºF (75ºC)	—
Engine speed		1,400 rpm	6,000 rpm
Vehicle speed		15 mph (24 km/h)	74 mph (120 km/h)
Throttle position	1,000 rpm	10.0º *1, *2	—
		7.6º *3	
	3,000 rpm	20.1º *1, *2	—
		17.4º *3	
No active DTCs		ECM/PCM, Primary HO2S*2, *3, A/F Sensor*1, Primary HO2S Heater*2, *3, A/F Sensor Heater*1, MAP, CKP, ECT, TP, CYP, EGR, BARO, IAC, VSS, VTEC System, Fuel System, Misfire	

*1: F23A4 engine
*2: F23A1 engine
*3: F23A5 engine

Malfunction Threshold

- The MAP sensor output is 54 kPa (406 mmHg, 15.9 in.Hg) or less for at least 2 seconds when atmospheric pressure is 101 kPa (760 mmHg, 29.9 in.Hg).
- The MAP sensor output is 33 kPa (255 mmHg, 10.0 in.Hg) or less for at least 2 seconds when atmospheric pressure is 61 kPa (460 mmHg, 18.1 in.Hg).

Driving Pattern

1. Start the engine. Hold the engine at 3,000 rpm with no load (in park or neutral) until the radiator fan comes on.
2. Drive the vehicle at a speed between 15 - 75 mph (24 - 120 km/h) with a predetermined throttle position for at least 2 seconds.

- If you have difficulty duplicating the DTC, retest after turning off electrical components such as the audio system and A/C, and try a different gear position.
- Drive the vehicle in this manner only if the traffic regulations and ambient conditions allow.

Diagnosis Details

Conditions for illuminating the MIL

When a malfunction is detected during the first drive cycle, a Temporary DTC is stored in the ECM/PCM memory. If the malfunction recurs during the next (second) drive cycle, the MIL comes on and the DTC and the freeze frame data are stored.

Conditions for clearing the MIL

The MIL will be cleared if the malfunction does not recur during three consecutive trips in which the diagnostic runs.
The MIL, the DTC, the Temporary DTC, and the freeze frame data can be cleared by using the scan tool Clear command or by disconnecting the battery.